December 14, 2001

TO: New Jersey Health Care Providers

FROM: George T. DiFerdinando, Jr., MD, MPH
Acting Commissioner

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State Epidemiologist/Assistant Commissioner

SUBJECT: Guide to Distinguish Inhalational Anthrax from Influenza-like Illness

The recent outbreak of anthrax has raised concern among clinicians on how to distinguish early inhalational anthrax from influenza-like illness (ILI). The New Jersey Department of Health and Senior Services (NJDHSS) has prepared the enclosed guide to assist practitioners in assessing patients who present with non-specific ILI symptoms. Although the risk of inhalational anthrax is very low, even among those with potential occupational exposures, we urge all practitioners to remain alert for this serious, but treatable illness. In the recent outbreak, those individuals detected in the initial phase of illness who were started on antibiotics on the day they sought care, had a high likelihood of surviving. However, the inappropriate use of antibiotics is discouraged due to the potential for side effects and antibiotic resistance.

New Jersey regulations require that all physicians and other health care providers immediately notify the local health department or the NJDHSS if they suspect a patient has inhalational (or cutaneous) anthrax. The number to call is 609-588-7500 during business hours, and 609-392-2020 at all other times. These numbers can also be called for any questions you may have or to request additional information.

Enclosures

New Jersey Department of Health and Senior Services (NJDHSS)

Clinicians' Guide to Distinguish Inhalational Anthrax from Influenza-Like Illness (ILI)

The recent outbreak of anthrax has raised concerns among health care practitioners on how best to distinguish influenza-like illness (ILI) from early symptoms of inhalational anthrax. To date, since the first reported patient in Florida on October 4, 2001, there have been a total of 11 patients reported, two in Florida, one in New York City, five in Washington, DC, two in New Jersey and one in Connecticut. Five of these 11 patients have died; the six survivors were discharged after prolonged hospitalizations (6-23 days). Ten of these patients are described in the publication *Emerging Infectious Diseases* (see below).

Influenza-like illness has many potential etiologies, both viral and bacterial. The majority of ILI is not caused by influenza but by other viruses or, less commonly, bacteria. Although ILI due to viruses generally occurs from late fall to early spring and spreads from person-to-person, ILI can occur throughout the year in all communities. Inhalational anthrax is not spread person-to-person.

Health care providers may distinguish inhalational anthrax from ILI by considering epidemiologic, clinical, laboratory and radiographic factors in evaluating patients. Laboratory and radiographic tests are not necessary to assess most individuals with ILI. However, in patients with several of the findings associated with inhalational anthrax, these tests will help to diagnose the illness. Antibiotics should not be prescribed before laboratory and/or radiographic tests are done to support a bacterial respiratory infection.

References:

1. Jernigan et al: Bioterrorism-related inhalational anthrax: the first 10 cases reported in the United States. *Emerging Infectious Diseases.* Posted November 8, 2001 at http://www.cdc.gov/ncidod/EID/vol7no6/jernigan.htm.

2. CDC. Update: investigation of bioterrorism-related anthrax and interim guidelines for exposure management and anitbicrobial therapy, October 2001. MMWR 50 (42):916-8, 2001. Posted at http://www,cdc,giv/mmwr/indexbt.html.

3. CDC. Update: investigation of bioterrorism-related anthrax and interim guidelines for clinical evaluation of persons with possible anthrax. MMWR 50 (43): 941-48. Posted at http://www,cdc,giv/mmwr/indexbt.html.

4. CDC. Considerations for distinguishing influenza-like illness from inhalational anthrax. MMWR 50 (44): 984-6, 2001 Posted at http://www,cdc,giv/mmwr/indexbt.html.

Division of Epidemiology, Environmental and Occupational Health
Communicable Disease Service
609-588-7500 Weekdays
609-392-2020 After Hours
www.state.nj.us/health

Findings Associated with Inhalational Anthrax*

Occupational/Environmental History

- ☐ Postal employee, working in facility with automated mail sorting equipment.
- ☐ Employee of media corporation or other high-profile company/institution (e.g. government) especially if he/she routinely handles mail.
- ☐ Individual exposed to animal products such as raw hides, goat hair, goat skins or wool.
- ☐ Anyone reporting a potential high-risk exposure to a suspicious letter(s) or contaminated powder in the week prior to illness onset.

Medical History

- ☐ Middle-aged and/or elderly
- ☐ No prior history of chronic cardiac or respiratory disease
- ☐ Fever, chills
- ☐ Sweats, often drenching
- ☐ Fatigue, malaise, lethargy
- ☐ Cough, minimal or non-productive
- ☐ Dyspnea
- ☐ Chest discomfort or pleuritic pain
- ☐ Nausea and/or vomiting
- ☐ Absence of sore throat
- ☐ Absence of rhinorrhea/nasal congestion

Physical Exam

- ☐ Fever
- ☐ Tachycardia
- ☐ Decreased breath sounds at lung bases
- ☐ Respiratory distress

Test Results Associated with Inhalational Anthrax

- ☐ Normal to slightly elevated WBC
- ☐ Increased proportion of neutrophils or bands
- ☐ Elevated serum transaminase levels
- ☐ Hypoxemia
- ☐ Abnormal Chest x-ray and/or CT Scan
  - Mediastinal widening
  - Infiltrates/consolidation
  - pleural effusion
- ☐ Positive blood cultures

Tests of Limited Value in Assessing Inhalational Anthrax

- Nasal swab for anthrax
- Rapid tests for influenza
- Viral cultures

*The more of these findings present in a patient, the higher the likelihood of the diagnosis of inhalational anthrax.